

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An automated data storage system, comprising:

a first media storage library having a first rail system comprising a set of rails disposed therein along a first axis;

a garage disposed adjacent said first media storage library, said garage having a movable rail system disposed therein;

one or a plurality of accessors, wherein said one or a plurality of accessors can be moved bidirectionally along said first rail system, and wherein each accessor comprises a running section, a vertical pillar extending outwardly from said running section, a lifting servo section which can be moved bidirectionally on said vertical pillar along a second axis, two robotic manipulators disposed on said lifting servo section, and a scanner disposed on said lifting servo section, wherein said second axis is perpendicular to said first axis;

wherein said ~~movable rail system~~ garage comprising comprises:

a second rail system comprising two parallel sets of rails, wherein each set of rails is disposed along a third axis, wherein that third axis is perpendicular to both said first axis and said second axis;

a ~~plurality of~~ movable set of rails, wherein ~~each~~ said movable set of rails can be moved bidirectionally along a ~~third axis, wherein said third axis is perpendicular to both said first axis and said second axis~~ said second rail system to be substantially colinear with said first rail

system such one or more accessors can be moved between said first rail system and said moveable rail system.

2. (original) The automated data storage system of claim 1, wherein said first rail system further comprises a proximal end and a distal end, and wherein said movable rail system further comprises a first end and a second end, and wherein said first end can be positioned to be substantially colinear with said proximal end such that said one or plurality of accessors can move between said first rail system and said movable rail system.

3. (original) The automated data storage system of claim 2, wherein said movable rail system further comprises a first positioning apparatus disposed on said first end and a second positioning apparatus disposed on said second end.

4. (original) The automated data storage system of claim 1, wherein said movable rail system comprises two parallel rails.

5. (original) The automated data storage system of claim 1, wherein said movable rail system comprises a plurality of paired parallel rails, wherein each of said plurality of paired parallel rails has a first end and a second end.

6. (original) The automated data storage system of claim 5, wherein each of said pairs of parallel rails further comprises a first positioning apparatus disposed on its first end and a second positioning apparatus disposed on its second end.

7. (original) The automated data storage system of claim 1, wherein said garage further comprises one or a plurality of doors.

8. (original) The automated data storage system of claim 1, wherein said first rail system comprises two parallel rails.

9. (original) The automated data storage system of claim 1, further comprising one or a plurality of movable media storage devices.

10. (currently amended) An automated data storage system, comprising:
a first media storage library having a first rail system comprising a set of rails disposed therein along a first axis;

a second media storage library having a second rail system comprising a set of rails disposed therein along said first axis;

one or a plurality of accessors, wherein each accessor comprises a running section, a vertical pillar extending outwardly from said running section, a lifting servo section which can be moved on said vertical pillar along a second axis, two robotic manipulators disposed on said lifting servo section, and a scanner disposed on said lifting servo section, wherein said second axis is perpendicular to said first axis;

a garage having a movable rail system disposed therein, wherein said garage is disposed adjacent said first media storage library and adjacent said second media storage library;

wherein said ~~movable rail system~~ garage comprises:

a third rail system comprising two parallel sets of rails, wherein each set of parallel rails is disposed along a third axis, wherein said third axis is perpendicular to both said first axis and said second axis;

a ~~plurality of~~ movable sets of rails, wherein ~~each~~ said movable set of rails can be moved bidirectionally along a ~~third axis, wherein said third axis is perpendicular to both said first axis and said second axis~~ said third rail system to be substantially colinear with said first rail system such one or more accessors can be moved between said first rail system and said moveable rail

system, and wherein said moveable set of rails can be moved bidirectionally along said third rail system to be to be substantially colinear with said second rail system such one or more accessors can be moved between said second rail system and said moveable rail system.

11. (original) The automated data storage system of claim 10, wherein said movable rail system can be positioned such that said one or a plurality of accessors can move between said first rail system and said movable rail system and between said second rail system and said movable rail system.

12. (original) The automated data storage system of claim 10, wherein said movable rail system further comprises a first positioning apparatus disposed on said first end and a second positioning apparatus disposed on said second end.

13. (original) The automated data storage system of claim 10, wherein said movable rail system comprises two parallel rails.

14. (original) The automated data storage system of claim 10, wherein said movable rail system comprises a plurality of paired parallel rails, wherein each of said plurality of paired parallel rails has a first end and a second end.

15. (original) The automated data storage system of claim 14, wherein each of said pairs of parallel rails further comprises a first positioning apparatus disposed on its first end and a second positioning apparatus disposed on its second end.

16. (original) The automated data storage system of claim 10, wherein said garage further comprises one or a plurality of doors.

17. (original) The automated data storage system of claim 10, wherein said first rail system and said second rail system each comprise two parallel rails.

18. (original) The automated data storage system of claim 10, further comprising one or a plurality of movable media storage devices.

19. (currently amended) A method of moving one or a plurality of accessors within an automated data storage system, said method comprising the steps of:

providing a first media storage library having a first rail system comprising a set of rails disposed therein along a first axis;

providing a second media storage library having a second rail system comprising a set of rails disposed therein along said second axis;

providing one or a plurality of accessors, wherein said one or a plurality of accessors each comprise a running section, a vertical pillar extending outwardly from said running section, a lifting servo section which can be moved along a second axis on said vertical pillar, two robotic manipulators disposed on said lifting servo section, and a scanner disposed on said lifting servo section, wherein said second axis is perpendicular to said first axis;

providing a garage having a movable rail system disposed therein, wherein said garage is disposed adjacent said first media storage library and adjacent said second media storage library, wherein said ~~movable rail system~~ garage comprises:

a third rail system comprising two parallel set of rails, wherein each set of rails is disposed along a third axis, wherein said third axis is perpendicular to both said first axis and said second axis;

a plurality of movable sets of rails, wherein each movable set of rails can be moved bidirectionally along a ~~third axis, wherein said third axis is perpendicular to both said first axis and said second axis~~ said third rail system;

movably disposing said one or a plurality of accessors on said first rail system;
positioning one of said moveable sets of rails to be substantially colinear with said first rail system;
moving said one or a plurality of accessors from said first rail system onto said movable set of rails;
positioning said movable set of rails to be substantially colinear with said second rail system;
moving said one or a plurality of accessors from said movable set of rails onto said second rail system.

20. (original) The method of claim 19, further comprising the steps of:
positioning said movable rail system to be substantially colinear with both said first rail system and said second rail system; and
moving said one or a plurality of accessors from said first rail system onto said movable rail system and then from said movable rail system onto said second rail system.

21. (original) The method of claim 20, wherein said movable rail system has a first end and a second end, and wherein said movable rail system further comprises a first positioning device disposed on said first end and a second positioning device on said second end.

22. (original) The method of claim 20, wherein said movable rail system comprises a plurality of paired parallel rails, wherein each of said plurality of paired parallel rails has a first end and a second end; and wherein each of said pairs of parallel rails further comprises a first positioning apparatus disposed on the first end and a second positioning apparatus disposed on the second end.

23. (original) A method to balance work load in an automated data storage system for storing and accessing a plurality of portable data storage cartridges stored in a plurality of storage slots, said automated data storage system comprising a plurality of accessors and a plurality of data storage drives, said drives used for receiving said data storage media and reading and/or writing data thereon, wherein said plurality of accessors access and transport said portable data storage cartridges between said storage slots and said data storage drives, said method comprising the steps of:

providing a first media storage library comprising a first rail system, a plurality of first storage slots, and a first data storage drive;

providing a second media storage library comprising a second rail system, a plurality of second storage slots, and a second data storage drive;

providing a garage having a plurality of movable rail systems disposed therein, wherein said garage is disposed adjacent said first media storage library and adjacent said second media storage library;

providing a movable media storage device movably disposed on one of said plurality of movable rail systems;

positioning said movable media storage device adjacent said first media library;

transferring one or a plurality of portable data storage cartridges from said first plurality of storage slots to said movable media storage device; and

positioning said movable media storage device adjacent said second media storage library.

24. (original) The method of claim 23, wherein said plurality of movable rail systems

comprises a plurality of paired parallel rails, wherein each of said plurality of paired parallel rails has a first end and a second end; and wherein each of said pairs of parallel rails further comprises a first positioning apparatus disposed on said first end and a second positioning apparatus disposed on said second end.

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